THE EFFECT OF INDUSTRIAL SECTOR GROWTH RATE, INVESTMENT AND WAGES ON LABOR ABSORPTION IN INDONESIA
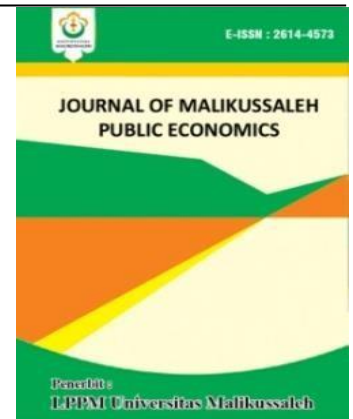
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A R T I C L E I N F O R M A T I O N

A B S T R A C T

The purpose of this study was to determine how much influence the Growth Rate Of The Industrial Sector, Investment And Wage On Employment In Indonesia. This study uses a panel data approach from 2018 to 2022 in 34 Provinces in Indonesia. This study uses a combination of Cross-Section data with Time Series with the help of Eviews 10. From testing the selected panel model, namely the Random Effect Model (REM), the results show that the Growth Rate Of The Industrial Sector partially has a positive and insignificant effect on Employment In 34 Provinces in Indonesia, partially Investment has a negative and insignificant effect on Employment In 34 Provinces in Indonesia and the variable allocation of funds, partially wages have a negative and significant effect on Employment In 34 Provinces in Indonesia. The test results simultaneously state that the variable Growth Rate Of The Industrial Sector, Investment and Wage have a significant effect on Employment In 34 Provinces in Indonesia.

1. INTRODUCTION

The economy of a country can be built through efforts that can be developed to increase per capita income is to convert a potential economic force into the real economy. This can be achieved through increased investment, empowerment of appropriate technology, and efforts to improve knowledge, skills, organizational and management capabilities (Sukirno, 1996).

There are several changes that must be realized to grow the economy. These changes are changes in the economic structure, which was previously dominated by the agricultural sector moving towards the industrial or service sector. Then there needs to be a change in institutions by looking at how much productive contribution is made by various natural resources (agriculture, fisheries / marine and mining) and human resources of a region, it can be seen the economic potential that can be built by a country. (Chusna, 2013). An industrialized economy can support a larger population than an agrarian economy. If the population increases over the years while the economy stagnates (due to limited land holdings or uneconomic social conditions) then a situation may be reached where the country's agricultural output does not increase relative to the increase in the agrarian population. This situation is the extreme form of over population and one level above it is the beginning of diminishing returns where an increase in population brings a disproportionate increase in production (Mulyadi, 2015).

The industrial sector has an important role in creating jobs, encouraging economic growth and community welfare, the industrial sector absorbs a lot of labor, both skilled and unskilled labor. This is because the industrial sector requires a lot of labor to carry out its production activities.

In encouraging economic growth, the industrial sector is one of the sectors that contributes greatly to Gross Domestic Product (GDP). GDP is the total value of goods and services produced by a country in a certain period. Based on data from the Central Bureau of

Statistics, the contribution of the industrial sector to Indonesia's GDP in 2022 was 22.7%. This figure shows that the industrial sector contributes significantly to the Indonesian economy. The rapid development of the industrial sector in Indonesia opens up great opportunities for economic growth and improving people's welfare. However, this also has the consequence of making more needs for labor. The percentage of labor absorption in 34 provinces in Indonesia fluctuates, where the highest percentage of labor absorption in Riau Islands Province in 2019 was 70.43%. while Papua Province with the lowest percentage of labor absorption was 15.89% in 2022. Labor absorption is certainly influenced by the growth rate of a sector, investment both from domestic and foreign, as well as changes in wage price levels reflected in provincial minimum wages.

One of the determining factors that influence labor absorption is the growth rate of the industrial sector by taking into account the increase in economic growth in a country can be seen through the growth rate in each sector where the population works. The growth of the industrial sector followed by the growth of other sectors can increase employment opportunities. So that if the economic growth rate of a sector is higher, the growth of employment opportunities in that sector will also be higher (Tahir, 2018). the growth rate of the industrial sector in 34 provinces in Indonesia fluctuates, where the highest growth rate of the industrial sector in Central Sulawesi Province in 2018 was 106.29%. while the lowest growth rate of the industrial sector in Central Kalimantan Province in 2020 was -0.05%.

The high growth rate of the industrial sector in Central Sulawesi Province is due to several factors, including: Increased Commodity Prices, Post-Disaster Recovery, Government Policy, Improved Performance of Other Sectors. There are other factors that influence labor absorption, namely investment. Referring to the statement of Sukirno, (2009), in order to achieve an increase in national income and the level of community prosperity through increased economic activity and employment opportunities in the community, investment activities are needed. This targeted investment activity will initially provide an opportunity for an increase in employment opportunities which will further increase people's income. Increased community income will then increase the purchasing power of the community. With the increase in people's purchasing power, entrepreneurs will be encouraged to increase the scale of production through the expansion of the scale of the company, either by increasing production capacity, for example buying new production machines, expanding production facilities and labor factors and various other production factors.

Investment development in 34 provinces in Indonesia where the highest investment development was in North Kalimantan Province in 2018 amounting to Rp. 980,773,700,000. While the lowest investment development in West Papua Province in 2019 amounted to Rp. 1,025,637,562. North Kalimantan Province (Kaltara) is one of the provinces in Indonesia with the highest level of investment in the natural resource sector. This is driven by several main factors, namely: Abundant Natural Resources, Supportive Government Policies, High Global Demand, Political Stability and Security, Skilled Labor.

Labor absorption is also influenced by the wage rate. According to Kuncoro (2002), an increase in wages will have an impact on the decrease in the amount of labor demand. If the increase in wages is not followed by changes in other input prices, the price of labor tends to be more expensive than other inputs. So that entrepreneurs are encouraged to replace labor which tends to be expensive with various other inputs that have cheaper prices in order to maintain profits. Statistically in research (Pramoto, 2015), labor absorption is negatively affected by the minimum wage. So that an increase in the minimum wage will cause a decrease in the level of employment.

Minimum wages in 34 provinces in Indonesia continue to increase every year, where the highest minimum wage is in South Sumatra Province in 2022 at Rp.4,497,960. While the lowest Provincial Minimum Wage in Yogyakarta Province is IDR 1,454,154.

According to the theory put forward by Adam Smith and David Ricardo, when wages increase, labor costs also increase. To maintain profits, companies will reduce the amount of labor used. Labor wages must be given in accordance with the cost of basic needs of workers and their families, laws and regulations related to Provincial Minimum Wages (UMP), marginal productivity of labor, differences in types of work, and must be in accordance with the aspirations of labor unions and agreements with employers' unions. Because in general, people's purchasing power will increase if there is an increase in people's income.

The problems of employment and labor absorption are not only caused by economic problems, but also by social problems. The problem of employment and labor absorption is not only about how to provide jobs for the labor force, but also questions the feasibility of existing jobs in providing services for workers (Effendi, 2014). The impact on labor absorption will be negative if it does not consider capital and aggregate expenditure in an effort to raise the minimum wage (Marlina & Purnomo, 2018).

Based on the discussion above, the author is interested in examining among the factors of the growth rate of the industrial sector, investment and wages on

labor absorption so that the background of the author to take the title "The Effect of Industrial Sector Growth Rate, Investment and Wages on Labor Absorption in Indonesia".

2. THEORETICAL REVIEW
Labor Absorption

Labor is the population of working age who are ready to do work, including those who are already working, those who are looking for work, those who are in school and those who take care of the household. Labor is an important factor in the production process because humans are able to mobilize other factors of production to produce goods.

Article 2 paragraph (2) of Law No.13 of 2013 states that labor is every man or woman who is in and or will do work, both inside and outside of work relations in order to produce goods or services to meet community needs.

Growth Rate of the Industrial Sector

Industry is all forms of activities related to industrial activities. What is meant by industrial activity is all economic activities in the form of processing raw materials and / or in the form of activities to utilize resources so as to produce value-added goods. This activity also includes industrial services (Rahmat et al., 2014). Furthermore, the Central Bureau of Statistics (BPS) defines industry as an activity of converting goods into value and converting goods with less value into more valuable goods.

Investment

Investment according to economists has several definitions. According to Tandelilin, (2021) investment is a commitment to a number of funds or other resources made at this time, with the aim of obtaining a number of future benefits. Tandelin added that investment also studies in managing investor's wealth which is monetary rather than spiritual wealth. Monetary welfare can be shown by the sum of current income and the present value of future income. Meanwhile, according to Dewi & Aminah, (2019) investment is a delay in current consumption to be put into productive assets over a certain period of time.

Provincial Minimum Wage

According to Sadono, (2013) wages are compensation for services received by someone in a working relationship in the form of money or goods, through a work agreement, compensation for services and are intended to meet the needs of themselves and their families. In terms of economic theory, wages are payments obtained in various forms of services provided and provided by labor to employers.

Wages are the rights of workers or laborers who are received and expressed in the form of money as compensation from employers or employers to workers or laborers who are determined and paid according to work agreements, agreements or laws and regulations, including benefits for workers or laborers and their families for work or services that have been or will be performed (Government Regulation No.36 of 2021).

3. RESEARCH METHODS
Data Analysis Method

Data analysis is an activity of processing data that has been collected and then being able to provide an interpretation of the results. The analysis method in this study uses Panel Data Regression analysis. According to Gujarati (2003) panel data is a combination of two data, namely time series and cross section data which is done by combining the two to improve the quality and quantity of research data.

Panel Data Analysis

Panel data analysis is a combination of time series from 2018-2022 and cross-section data consisting of data from 34 Provinsi di Indonesia. This data will be used to solve the problems in this study is panel data regression. There are 3 model approaches in solving panel data regression, namely:
1. Cammon Effect Model (CEM)
   Common Effect Model (CEM) is an estimation that combines (pooled) all time series and cross section data and uses the OLS (ordinary broad square) approach to estimate its parameters.
2. Fixed Effect Model
   The fixed effect model (FEM) regression model is a panel data estimation technique using dummy variables to explain intercept differences. This approach is based on differences in intercepts between cross sections but the same between time series.
3. Random Effect Model
   The random effect model (REM) regression model is a variation of the generalized Least square (GLS) estimation. REM accounts for errors from panel data using the least squares method. This approach improves the efficiency of the least squares process by accounting for errors from both cross-section and time series.

Panel Data Regression Model

To test the independent variables on the dependent variable, we can use Ordinary Least Squares (OLS) regression analysis. This method is easy to estimate efficiency by using panel data that ignores the dimensions of individuals (companies) and time (years), usually called OLS pool regression.

Model Selection Technique

To estimate the model with panel data, there are three approaches in panel data analysis, namely pooling least square (Common Effect), fixed effect approach (Fixed Effect), random effect approach (Random Effect). In panel data, there are several techniques for assessing parameter estimates, such as the Common Effect Model (CEM), Fixed Effect Model (FEM) and Random Effect Model (REM) approaches (Gujarati, 2003).

Chow Test

The Chow test determines the most appropriate Fixed Effect or Random Effect model for estimating panel data. According to (Widarjono, 2017), in the Chow test the hypothesis formed is as follows: The hypothesis formed in the Chow test is as follows:

H_0 : Common Effect Model
H_1 : Fixed Effect Model

Husman Test (Hausman Test)

This Hausmant test is used to compare FEM with REM so that it can determine which model is best used as a panel data regression model (Gujarati, and Proter 2009). The Hausmant test also uses the Eviews assistance program. The hypothesis used in the Hausman test is as follows:

H_0: random effect model
H_1: fixed effect model

Lagrange Multiplier (LM) Test

The Langrage Multiplier test is an analysis carried out with the aim of selecting or determining the best method of regressing panel data, using Common Effect or Random Effect (Baltagi, 2005).

Classical Assumption Test

Equations that meet classical assumptions are only equations that use the Generalized Least Square (GLS) method. Then in eviews, the estimation model that uses the GLS method is only the Cammon Effect Model, while the Common Effect and Fixed Effect use Ordinary Least Square (OLS), according to Gujarati & Porter (2009).

Normality Test

The normality test is carried out to see whether the data used has a normal or abnormal distribution. The classic normality assumption test assumes that the probability distribution of the disturbance t has an expected average equal to zero, is uncorrelated and has a constant variance. With this assumption, the estimator will fulfill the desired statistical properties and have a minimum variance (Gujarati, 2003). Normality can be detected using the Jarquare-Berra (JB) test, if the calculated JB < the (Chis-Square) table value then the residual value is normally distributed.

Heteroscedasticity Test

This test is a test to determine the inequality of variance from the residuals of one observation to another. to find out if the test results on the independent variable are greater than 0.05, it is free from heteroscedasticity.

Multicollinearity Test

According to Gujarati, (2003) the multicollinearity test is the presence of a strong linear relationship between several or all of the independent variables in the regression model.

Autocorrelation Test

Autocorrelation is the relationship between residuals (Gujarati, 2003 pp 469-470; Gujarati & Porter, 2009, pp 434-437). To determine whether or not there is autocorrelation in the regression model, it is necessary to conduct the Durbin-Watson (DW) test.

Hypothesis Testing

Hypothesis testing conducted in this study was carried out to determine the effect of independent variables (Industrial Sector Growth Rate, investment and wages) on the dependent variable (employment).

Partial Test (t-test)

To see the effect of each independent variable, it is necessary to conduct a one-way t-test Statistics The t-statistic test is conducted to determine the significance of the independent variable on the dependent variable (Gujarati, 2003).

Simultaneous Test (F Test)

In the F test, it can be seen how the influence of all independent variables is, if the significance value of the F test statistic 0 significance level (α) test, the F test hypothesis is rejected, meaning that there is a significant influence of all independent variables on the dependent variable (Gujarati & Porter, 2009).

Determination test (R^2)

According to (Gujarati, 2003) The coefficient of determination (R^2) is used to determine how much the variation parameter in the dependent variable in the model can be applied by the independent variable. The R^2 value is used for the total proportion of variables in the dependent variable explained in regression or to see how well the independent variable is able to explain the dependent variable.

4. RESEARCH RESULTS AND DISCUSSION

Analysis Of Research Data Description

This research is a quantitative study using secondary data from 34 provinces in Indonesia. In the analysis using eviews 10. The object of research in 34 provinces in Indonesia using employment as the dependent variable, the growth rate of the industrial sector, investment and wages as independent variables.

Chow Test

Table 1
Chow Test

Effects Test	Statistic	d.f.	Prob.
Cross-section F	113.3511 20	(33,133)	0.0000
Cross-section Chi-square	573.1698 06	33	0.0000

Source: Data Processed (2024)

The Chow Test results with Eviews 10 can be seen in Table 1 The p-value on the cross-section F is 0.0000; if the p-value is lower than the significance level ($\alpha=0.05$), then H_0 is rejected and H_1 is accepted. The Chow test shows that the Fixed Effect model is the best model to use. Given the Chow Test results that show H_0 is rejected, the test is continued with the Hausaman Test.

Hausman Test

Table 2
Hausman Test

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	5.584246	3	0.1337

Source: Data processed from Eviews output (2024)

Based on Table 2 the p-value on the Cross-section random is 0.1337, the p-value> 0.05 so that H_0 is accepted, H_1 is rejected. Then the best model used is the random effect model (REM).
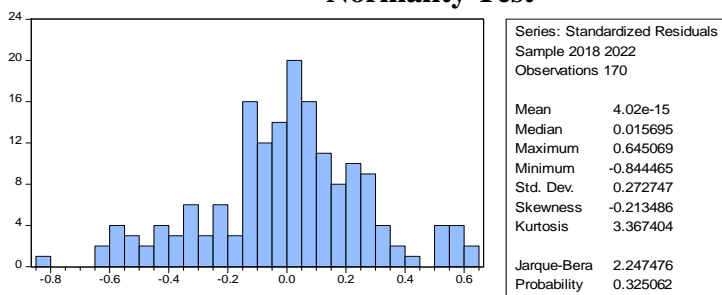
Classical Assumption Test

The model chosen is REM. Therefore, the classical assumption tests must be used are Normality Test and Multicollinearity Test.

Normality Test

The normality test is carried out to test whether this regression model has a normal distribution or not. In this study, the normality test used the Jarque-Bera Test (J-B Test) approach. The results obtained in this study are as follows:

Diagram 1
Normality Test

Series: Standardized Residuals	
Sample 2018 2022	
Observations 170	
Mean	4.02e-15
Median	0.015695
Maximum	0.645069
Minimum	-0.844465
Std. Dev.	0.272747
Skewness	-0.213486
Kurtosis	3.367404
Jarque-Bera	2.247476
Probability	0.325062

Source: Data Processing Results, 2024

Based on diagram 1 above, it can be seen that the Jarque Bera value is 2.247476 and the probability is greater than the 5% significant level, namely (0.325> 0.05), it is concluded that in this study the data has been distributed normally.

Muticollinearity Test

This test is a test to determine whether there is a significant relationship between some or all of the independent variables in the test. A good model is a model that is not exposed to multicollinearity tests. To see whether or not the multicollinearity test is seen from the respective coefficients. If the partial correlation coefficient of the variables is greater than 0.90, there are symptoms of multicollinearity. If <0.90 there are no symptoms of multicollinearity (Gujarati, and Proter, 2009).

Tabel 3
Multicolinerity Test

	LPSI	LOG(I)	LOG(UMP)
LPSI	1	0.026157968 71349042	-0.009475291 230074046
LOG(I)	0.026157968 71349042	1	-0.003149490 6217783
LOG(UMP)	-0.009475291 230074046	-0.003149490 6217783	1

Source: Data Processing Results, 2024

Based on Table 3, it can be seen that there is no multicollinearity. Multicollinearity Test Results there is no high correlation value between independent variables not exceeding 0.90. Based on Table 3, it can be seen that

the correlation of LPSI, Investment and UMP values is <0.90, so this model is free from multicollinearity assumptions.

Panel Data Analysis

In this study, data management uses panel data regression, which means a combination of time series and cross section data. There are several stages in the use of panel data regression including the Common Effect Model, Fixed effect Model and Random Effect Model. The results of the Random Effect model estimation in this study are as follows:

Table 4
Regression Equation

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	155.9350	24.94974	6.249965	0.0000
LPSI	0.017952	0.018606	0.964833	0.3360
LOG(I)	-0.189170	0.122352	-1.546111	0.1240
LOG(UMP)	-7.505207	1.663478	-4.511756	0.0000

Source: Data processed from Eviews output (2024)

The panel data regression equation formed with the Random Effect Model approach based on Table 4 is as follows:

PTK = 155.9350 + 0.017952 *LPSI -0.189170 *LOG (I) -7.505207 *LOG (UMP)

a. Constant (β_0) = 155.9350, is if the growth rate of industrial sector, investment and minimum wage are constant (fixed) = 0, then employment will also be constant at 155.9%.

b. Parameter (β_1) = 0.017952, is if the growth rate of the industrial sector increases by 1%, then employment will increase by 0.017% with the assumption that it is constant (= 0).

c. Parameter (β_2) = -0.189170 is if investment increases by 1%, then employment will decrease by -0.18% assuming investment is constant (= 0).

d. Parameter (β_3) = -7.505207 is if the minimum wage increases by 1%, then employment will decrease by -7.50% assuming the minimum wage is constant (= 0).

Coefficient Results for Each Province

Table 5
Coefficient Results for Each Province

Provinsi Indonesia	Nilai Intersep	Konstanta Intersep
_ACEH—C	0.673736	156,608736
_BALI—C	5.782161	161,717161
_BANGKABELITUNG—C	10.72638	166,66138
_BANTEN—C	12.37028	168,30528
_BENGKULU—C	-10.62202	145,31298
_GORONTALO—C	-2.639838	153,295162
_JAKARTA—C	27.97040	183,9054
_JAMBI—C	-0.064183	155,870817
_JAWABARAT—C	3.946471	159,881471
_JAWATENGAH—C	-4.049314	151,885686
_JAWATIMUR—C	-6.032189	149,902811
_KALIMANTANBARAT—C	-1.357390	154,57761
_KALIMANTANSELATAN—C	0.854442	156,789442
_KALIMANTANTENGAH—C	6.419256	162,354256
_KALIMANTANTIMUR—C	13.09455	169,02955
_KALIMANTANUTARA—C	12.12506	168,06006
_KEPRIAU—C	26.22715	182,16215
_LAMPUNG—C	-12.15803	143,77697
_MALUKU—C	-4.535673	151,399327
_MALUKUUTARA—C	-5.819536	150,115464
_NTB—C	-15.26577	140,66923
_NTT—C	-18.16838	137,76662
_PAPUA—C	-18.61823	137,31677
_PAPUABARAT—C	3.720177	159,655177
_RIAU—C	6.021614	161,956614
_SULAWESIBARAT—C	-14.10105	141,83395
_SULAWESISELATAN—C	-2.618478	153,316522
_SULAWESITENGAH—C	-8.538370	147,39663
_SULAWESITENGGARA--C	-4.196640	151,73836
_SULAWESIUTARA--C	2.415327	158,350327
_SUMATERABARAT--C	-5.748900	150,1861
_SUMATERASELATAN--C	-0.346669	155,588331
_SUMATERAUTARA--C	1.022641	156,957641
_YOGYAKARTA--C	1.511009	157,446009

Source: Data Processing Results, 2024

Based on Table 5 the value of the constant coefficient of each province of Indonesia can be explained by the value of the coefficient (C) describing the high and low of Labor Absorption if it is assumed

that the variables of Industrial Sector Growth Rate, Investment and Minmum Wage.

1. In Aceh Province- C obtained Intercept / constant value of 155.9350 is (155.9350 + 0.673736) =156.608736 meaning that if the variable level of industrial sector growth rate, investment, and minimum wage is constant (zero) then employment in Aceh Province will also be constant at 156.608736.

2. In Bali Province - C, the obtained Intercept / constant value of 155.9350 is (155.9350 + 5.782161) = 161.717161, which means that if the variable level of the growth rate of the industrial sector, investment, and minimum wage is constant (zero) then employment in Bali Province will also be constant at 161.717161.

3. In Bangka Belitung Province - C, the Intercept / constant value of 155.9350 is obtained (155.9350 +10.72638) = 166.66138, which means that if the growth rate of the industrial sector, investment, and minimum wage is constant (zero) then employment in Bangka Belitung Province will also be constant at 166.66138.

4. In Banten Province - C, the Intercept / constant value of 155.9350 is obtained (155.9350 + 12.37028) = 168.30528, which means that if the variable level of the growth rate of the industrial sector, investment, and minimum wage is constant (zero) then the absorption of labor in Banten Province will also be constant at 168.30528.

5. In Bengkulu Province- C obtained Intercept / constant value of 155.9350 is (155.9350 - 10.62202) = 145.31298 meaning that if the variable level of the growth rate of the industrial sector, investment, and minimum wage is constant (zero) then employment in Bengkulu Province will also be constant at 145.31298.

6. In Gorontalo Province - C, the Intercept / constant value of 155.9350 is obtained (155.9350 - 2.639838) = 153.295162, which means that if the variable level of the growth rate of the industrial sector, investment, and minimum wage is constant (zero) then employment in Gorontalo Province will also be constant at 153.295162.

7. In DKI Jakarta Province - C, the Intercept/concept value of 155.9350 is obtained (155.9350 + 27.97040) = 183.9054, which means that if the variable level of the growth rate of the industrial sector, investment, and minimum wage is constant (zero) then employment in Jakarta Province will also be constant at 183.9054.

8. In Jambi Province - C, the Intercept/concept value of 155.9350 is obtained (155.9350 - 0.064183) = 155.870817, which means that if the variable level of the growth rate of the industrial sector, investment, and minimum wage is constant (zero) then employment in Jambi Province will also be constant at 155.870817.

9. In West Java Province- C, the Intercept / constant value of 155.9350 is obtained (155.9350 + 3.946471) = 159.881471, which means that if the variable level of the growth rate of the industrial sector, investment, and minimum wage is constant (zero) then employment in West Java Province will also be constant at 159.881471.

10. In Central Java Province - C, the Intercept / constant value of 155.9350 is obtained (155.9350 - 4.049314) = 151.881471, which means that if the variable level of the growth rate of the industrial sector, investment, and minimum wage is constant (zero) then employment in Central Java Province will also be constant at 151.881471.

11. In East Java Province - C, the Intercept / constant value of 155.9350 is obtained (155.9350 - 6.032189) = 149.902811, which means that if the variable level of the growth rate of the industrial sector, investment, and minimum wage is constant (zero) then employment in East Java Province will also be constant at 149.902811.

12. In West Kalimantan Province - C, the Intercept / constant value of 155.9350 is obtained (155.9350 - 1.357390 = 154.57761, which means that if the variable level of the growth rate of the industrial sector, investment, and minimum wage is constant (zero) then employment in West Kalimantan Province will also be constant at 154.57761.

13. In South Kalimantan Province - C, the Intercept / constant value of 155.9350 is obtained (155.9350 + 0.854442) = 156.789442, which means that if the variable level of the growth rate of the industrial sector, investment, and minimum wage is constant (zero) then employment in South Kalimantan Province will also be constant at 156.789442.

14. In Central Kalimantan Province- C, the Intercept / constant value of 155.9350 is obtained (155.9350 + 6.419256) = 162.354256, which means that if the variable level of the growth rate of the industrial sector, investment, and minimum wage is constant (zero) then employment in Central Kalimantan Province will also be constant at 162.354256.

15. In East Kalimantan Province- C, the Intercept / constant value of 155.9350 is obtained (155.9350 + 13.09455) = 169.02955, which means that if

the variable level of the growth rate of the industrial sector, investment, and minimum wage is constant (zero) then employment in East Kalimantan Province will also be constant at 169.02955.

16. In North Kalimantan Province - C, the Intercept / constant value of 155.9350 is obtained (155.9350 + 12.12506) = 168.06006, which means that if the variable level of the growth rate of the industrial sector, investment, and minimum wage is constant (zero) then employment in North Kalimantan Province will also be constant at 168.06006.

17. In Riau Province - C, the Intercept / constant value of 155.9350 is obtained (155.9350 + 26.22715) = 182.16215, which means that if the variable level of industrial sector growth rate, investment, and minimum wage is constant (zero) then employment in Riau Province will also be constant at 182.16215.

18. In Lampung Province - C, the Intercept / constant value of 155.9350 is obtained (155.9350 - 12.15803) = 143.77697, which means that if the variable level of the growth rate of the industrial sector, investment, and minimum wage is constant (zero) then employment in Lampung Province will also be constant at 143.77697.

19. In Maluku Province- C, the Intercept / constant value of 155.9350 is obtained (155.9350 - 4.535673) = 151.399327, which means that if the variable level of the growth rate of the industrial sector, investment, and minimum wage is constant (zero) then employment in Maluku Province will also be constant at 151.399327.

20. In North Maluku Province - C, the Intercept/concept value of 155.9350 is obtained (155.9350 - 5.819536) = 150.115464, which means that if the variable level of the growth rate of the industrial sector, investment, and minimum wage is constant (zero) then employment in North Maluku Province will also be constant at 150.115464.

21. In NTB Province- C, the Intercept / constant value of 155.9350 is obtained (155.9350 - 15.26577) = 140.66923, which means that if the variable level of the growth rate of the industrial sector, investment, and minimum wage is constant (zero) then employment in NTB Province will also be constant at 140.66923.

22. In NTT Province- C, the Intercept / constant value of 155.9350 is obtained (155.9350 - 18.16838) = 137.76662, which means that if the variable level of the growth rate of the industrial sector, investment, and minimum wage is constant (zero) then employment in NTT Province will also be constant at 137.76662.

23. In Papua Province- C, the Intercept / constant value of 155.9350 is obtained (155.9350 - 18.61823) = 137.31677, which means that if the variable level of the growth rate of the industrial sector, investment, and minimum wage is constant (zero) then employment in Papua Province will also be constant at 137.31677.

24. In West Papua Province - C, the Intercept/concept value of 155.9350 is obtained (155.9350 + 3.720177) = 159.655177, which means that if the variable level of the growth rate of the industrial sector, investment, and minimum wage is constant (zero) then employment in West Papua Province will also be constant at 159.655177.

25. In Riau Province- C obtained Intercept/concept value of 155.9350 is (155.9350 + 6.021614) = 161.956614 meaning that if the variable level of industrial sector growth rate, investment, and minimum wage is constant (zero) then employment in Riau Province will also be constant at 161.956614.

26. In West Sulawesi Province - C, the Intercept / constant value of 155.9350 is obtained (155.9350 - 14.10105) = 141.83395, which means that if the variable level of the growth rate of the industrial sector, investment, and minimum wage is constant (zero) then employment in West Sulawesi Province will also be constant at 141.83395.

27. In South Sulawesi Province- C obtained Intercept / constant value of 155.9350 is (155.9350 - 2.618478)= 153.316522 meaning that if the variable level of industrial sector growth rate, investment, and minimum wage is constant (zero) then employment in South Sulawesi will also be constant at 153.316522.

28. In Central Sulawesi Province - C, the Intercept / constant value of 155.9350 is obtained (155.9350 - 8.538370) = 147.39663, which means that if the variable level of the growth rate of the industrial sector, investment, and minimum wage is constant (zero) then employment in Central Sulawesi Province will also be constant at 147.39663.

29. In Central Sulawesi Province- C, the Intercept/constant value of 155.9350 is obtained (155.9350 - 4.196640) = 151.73836, which means that if the variable level of industrial sector growth rate, investment, and minimum wage is constant (zero) then employment in Central Sulawesi Province will also be constant at 151.73836. will be constant at 151.73836.

30. In North Sulawesi Province- C, the Intercept/concept value of 155.9350 is obtained (155.9350 + 2.415327) = 158.350327, which means that if the variable level of the growth rate of the industrial sector, investment, and minimum wage is constant (zero) then employment in North Sulawesi Province will also be constant at 158.350327.

31. In West Sumatra Province - C, the Intercept / constant value of 155.9350 is obtained (155.9350 - 5.748900) = 150.1861, which means that if the variable level of the growth rate of the industrial sector, investment, and minimum wage is constant (zero) then employment in West Sumatra Province will also be constant at 150.1861.

32. In South Sumatra Province- C, the Intercept/concept value of 155.9350 is obtained (155.9350 - 0.346669) = 155.588331, which means that if the variable level of the growth rate of the industrial sector, investment, and minimum wage is constant (zero) then employment in South Sumatra Province will also be constant at 155.588331.

33. In North Sumatra Province- C, the Intercept/concept value of 155.9350 is obtained (155.9350 + 1.022641) = 156.957641, which means that if the variable level of the growth rate of the industrial sector, investment, and minimum wage is constant (zero) then employment in North Sumatra Province will also be constant at 156.957641.

34. In Yogyakarta Province - C, the Intercept / constant value of 155.9350 is obtained (155.9350 + 1.511009) = 157.446009, which means that if the variable level of the growth rate of the industrial sector, investment, and minimum wage is constant (zero) then employment in Yogyakarta Province will also be constant at 157.446009.

Hypothesis Test
Partial Test (t-test)

The t-statistic test is carried out to see the significance of the effect of the independent variable individually on the dependent variable by holding the other variables constant.

Table 6
T-test

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	155.9350	24.94974	6.249965	0.0000
LPSI	0.017952	0.018606	0.964833	0.3360
LOG(I)	-0.189170	0.122352	-1.546111	0.1240
LOG(UMP)	-7.505207	1.663478	-4.511756	0.0000

Source: Data Processing Results, 2024

a. The t test results on LPSI obtained a t value of $1.144883 < 1.65408$ t table and sig value. $0.3360 > 0.05$, then H_0 is rejected H_a is accepted, meaning that the LPSI variable has a positive and insignificant effect on the PTK variable.

b. The t test results on the Investment variable obtained a t value of $-2.270661 <$ t table, namely 1.65408 and a sig value. $0.1240 > 0.05$, then H_0 is rejected H_a is accepted, meaning that the Investment variable has a negative and insignificant effect on the PTK variable.

c. The t test results on the UMP variable obtained a t value of $-5.041358 <$ t table, namely 1.65408 and a sig value. $0.0000 < 0.05$, then H_0 is accepted H_a is rejected, meaning that the UMP variable has a negative and significant effect on the PTK variable.

Simultaneous Test (F-test)

If F-count < F-table, then we admit H_0 and reject H_a, meaning that each independent variable (growth rate of industrial sector, investment and wage) all equally affect the dependent variable (labor absorption).

Table 7
Hasil Uji F
Weighted Statistics

R-squared	0.120611	Mean dependent var	3.726166
Adjusted R-squared	0.104718	S.D. dependent var	2.278637
S.E. of regression	2.156031	Sum squared resid	771.6460
F-statistic	7.589142	Durbin-Watson stat	1.714976
Prob(F-statistic)	0.000087		

Unweighted Statistics

R-squared	-0.092392	Mean dependent var	40.82941
Sum squared resid	20048.54	Durbin-Watson stat	0.066007

Source: Data Processing Results, 2024

Based on the F Hypothesis Test (test together) is (k-1) (n-k) = (4-1) (170-4) = (3) (166) is 2.66 therefore F count> F table or F statistics of 109.4106> 2.66 then H0 is rejected and Ha is accepted, which means that together the variables of Industrial Sector Growth Rate,

r0Investment and Minimum Wage simultaneously have a significant effect on Labor Absorption in 34 provinces in Indonesia This can also be seen from the probability (p-value) of 0.000087 <0.05.

Determination Coefficient Test (R2)

Used to see how much influence the independent variable has on the dependent variable seen through the Adusted R-Squared coefficient. The coefficient of determination is between 0 and one.

Tabel 8
Hasil Uji Determinasi (R^2)

Weighted Statistics

		Mean dependent	
R-squared	0.120611	var	3.726166
Adjusted R-squared	0.104718	S.D. dependent var	2.278637
S.E. of regression	2.156031	Sum squared resid	771.6460
F-statistic	7.589142	Durbin-Watson stat	1.714976
Prob(F-statistic)	0.000087		

Unweighted Statistics

		Mean dependent	
R-squared	-0.092392	var	40.82941
Sum squared resid	20048.54	Durbin-Watson stat	0.066007

Source: Data processed from Eviews output (2024)

Based on the results of panel data regression testing with the Random effect model method, the adjusted $R2$ value is 0.104718, which means that in this regression model, the magnitude of the effect of the growth rate of the industrial sector, investment and minimum wage on labor absorption is 0.104% and 1- 0.104718 = 0.0895282, which means that the other 0.89% is influenced outside this variable.

4. DISCUSSION

The selected model is the Random effect model (REM). The following is an explanation related to the independent and dependent variables based on partial and simultaneous tests.

Relationship between Industrial Sector Growth Rate and Labor Absorption

From the results of data processing research, it is explained that the variable growth rate of the industrial sector has a positive and insignificant effect on labor absorption in Indonesia. It indicates that if the growth rate of the industrial sector increases, the absorption of labor will increase.

Investment Relationship to Labor Absorption

From the results of data processing research, it is explained that the investment variable has a negative and insignificant effect on labor absorption in Indonesia. It indicates that if investment increases, labor absorption decreases.

Minimum Wage Relationship to Labor Absorption

From the results of data processing research, it is explained that the wage variable has a negative and significant effect on labor absorption in Indonesia. It indicates that if the wage increases, the absorption of labor decreases. This is in accordance with the initial hypothesis that wages have a negative and significant effect on labor absorption in Indonesia.

The Relationship of Industrial Sector Growth Rate, Investment and Wages to Labor Absorption

From the results of data processing research, it is explained that the variable growth rate of the industrial sector, investment and wages together have a significant effect on labor absorption in Indonesia. The results of this study are in line with research conducted by Siregar et al., (2022) that the growth rate of the industrial sector, investment and wages simultaneously affect labor absorption.

CONCLUSIONS AND SUGGESTIONS
Conclusion

Based on this analysis, it can be concluded as follows:
1. Partially, the growth rate of the industrial sector has a positive and insignificant effect on labor absorption in Indonesia, so that when the growth rate of the industrial sector increases, it will be followed by labor absorption in Indonesia.
2. Partially, investment has a negative and significant effect on labor absorption in Indonesia, the effect of investment on labor absorption is unidirectional, meaning that if there is an increase in investment, then labor absorption will decrease, the existence of automation and labor substitution causes a reduction in labor needs.
3. Partially, wages have a negative and significant effect on labor absorption in Indonesia, the effect of wages on labor absorption is unidirectional, meaning that if there is an increase in wages, it has the potential to reduce labor absorption, especially labor with low productivity.
4. Simultaneously, the growth rate of the industrial sector, investment and wages are significant to labor absorption in Indonesia.

Suggestion

Based on the research results and conclusions obtained, the suggestions that can be given by researchers on

research, namely as follows:

1. Encourage the industrial sector to further increase activities in order to spur and support the growth rate of the industrial sector. This can be supported by the increasing investment entering Indonesia. wage setting will be a consideration for employers so that in setting wages the government needs to pay attention to economic conditions and the labor market.
2. Improve industrial efficiency and productivity through technological modernization, workforce training, and regulatory reform. On the one hand, technology has the potential to replace the role of human labor. Automation and robotics allow industries to complete repetitive tasks more quickly, accurately and cheaply. However, on the other hand, technology also opens up new opportunities to increase the added value of human labor. Here are some examples:
   a. Skills Enhancement: Technology can help workers learn new skills and hone their expertise through online training, virtual simulations, and augmented reality.
   b. Better Collaboration: Online communication and collaboration tools allow teams to work together more effectively, regardless of their location.
   c. Smarter Decision Making: Data analytics and artificial intelligence can help companies to make more informed and strategic decisions based on real-time data.
   d. New Job Creation: Technology is also giving birth to new industries and jobs that were previously unimaginable, such as AI developers, robotics specialists, and cybersecurity experts.
3. The wage setting policy is one of the government policies to intervene in the labor market which is directed to create a labor market. The minimum wage policy is still needed as a reference for a decent wage for workers and needs to be balanced with other policies such as increasing capacity by increasing company productivity and increasing production at a lower cost.

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